

Standard rules SR2010No14_500t

Composting in open and closed systems

Introductory note

This introductory note does not form part of these standard rules.

When referred to in an environmental permit, these standard rules will allow the operator to carry out a composting activity involving the storage, physical treatment and composting of specified biodegradable wastes in either an open or a closed (in-vessel) composting system. The types of waste that can be accepted and the operating techniques that can be used depend on whether an open or a closed composting system is used. In either case, composting can only be carried out under aerobic conditions and no hazardous wastes are allowed.

The total quantity of waste that can be in storage, physical treatment and composting at any one time under these standard rules may not exceed 500 tonnes. Any wastes controlled by the Animal By-Products Regulations must be treated and handled in accordance with any requirements imposed by those Regulations. These standard rules do not permit the burning of any wastes, either in the open, inside buildings or in any form of incinerator.

These standard rules do not allow any point source emission into surface waters or groundwater. However, under the emissions of substances not controlled by emission limits rule:

- liquids may be discharged into a foul sewer subject to a consent issued by the local water company;
- liquids may be taken off-site in a tanker for disposal or recovery;
- clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste, may be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.

End of Introductory Note

Rules

1 – Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with rule 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in these standard rules shall have convenient access to a copy of them kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Avoidance, recovery and disposal of wastes produced by the activities

- 1.2.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.2.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 – Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in table 2.1 below ("the activities").

Table 2.1 Activities	
Description of activities	Limits of activities
R13: Storage of wastes pending the operation numbered R3	Secure storage of wastes listed in table 2.2A and 2.2B. Physical treatment and composting of the types of waste listed in table 2.2A and 2.2B to produce compost.
R3: Recycling/reclamation of organic substances which are not used as solvents	The total quantities of wastes in storage, undergoing treatment and composting shall not exceed 500 tonnes at any one time. The treatment capacity of any plant shall not exceed 10 tonnes per day of animal waste.

2.2 Waste acceptance

2.2.1 Waste shall only be accepted if:

- (a) it is of a type in table 2.2A below for open or closed systems or it is of a type in table 2.2B below for closed systems;
- (b) it conforms to the description in the documentation supplied by the producer and holder and
- (c) it consists only of biodegradable material..

2.2.2 Records demonstrating compliance with rule 2.2.1 shall be maintained.

Table 2.2A Waste types - open or closed systems	
Exclusions:	
Wastes having any of the following characteristics shall not be accepted in;	
Open systems:	
<ul style="list-style-type: none"> • Catering waste and other wastes containing animal by products covered by the Animal By-Products Regulations (except waste code 02 01 06); • Wastes in liquid form. 	
Open or closed systems:	
<ul style="list-style-type: none"> • Wastes consisting solely or mainly of dusts (except sawdust), powders or loose fibres; • Hazardous wastes; • Wastes containing treated wood; • Wastes containing wood-preserving agents or other biocides; • Wastes containing persistent organic pollutants • Wastes containing Japanese Knotweed. 	
Waste Code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 07	waste from forestry (biodegradable only)
02 01 99	wastes not otherwise specified (spent mushroom compost and fully biodegradable animal bedding)

	only)
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood and particle board other than those in 03 01 04 only
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
03 03 10	fibre rejects only
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging (excluding veneers, plastic coatings or laminates)
15 01 03	wooden packaging
15 01 09	textile packaging (made entirely from biodegradable fibres only)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	Wood
17 05	soils (excluding excavated soils from contaminated sites), stones and dredging spoil
17 05 06	dredging spoil other than those mentioned in 17 07 05 (from inland waters only)
19	WASTE FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physic/chemical treatments of waste (including dechromatation, decyanidation, neutralisation
19 02 03	premixed wastes composed only of non-hazardous wastes (waste types listed within Table 2A of these standard rules only)
19 05	wastes from the aerobic treatment of solid wastes
19 05 03	off-specification compost (from a composting process that accepts waste input types listed within Table 2A of these standard rules only)
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (and only including wastes types listed within Table 2A of these standard rules)
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions
20 01 01	paper and cardboard (excluding veneers, plastic coatings or laminates)
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics (compostable plastics only)
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste (plant matter only)

Table 2.2B. Waste types – closed systems only**Exclusions:****Wastes having any of the following characteristics shall not be accepted in closed systems:**

- Wastes consisting solely or mainly of dusts (except sawdust), powders or loose fibres;
- Hazardous wastes;
- Wastes containing treated wood;
- Wastes containing wood-preserving agents or other biocides;
- Wastes containing persistent organic pollutants;
- Wastes containing Japanese Knotweed.

Waste Code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 02	animal tissue waste
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 02	animal tissue waste
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 04	materials unsuitable for consumption or processing (biodegradable only)
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing (biodegradable only)
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing (biodegradable only)
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials (biodegradable only)
02 07 02	wastes from spirits distillation (biodegradable only)
02 07 99	wastes not otherwise specified (malt husks, malt sprouts, yeast and yeast-like residues only)
19	WASTE FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physic/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes (waste types listed within these standard rules only)
19 05	wastes from the aerobic treatment of solid wastes
19 05 03	off-specification compost (from a composting process that accepts waste input types listed within these standard rules only)
19 06	waste from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste (only if derived from source segregated input types listed in these standard rules)
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (only if derived from input types listed in these standard rules)
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified

19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (and only including wastes types listed within these standard rules)
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01 08	biodegradable kitchen and canteen waste
20 03	other municipal wastes
20 03 02	wastes from markets (biodegradable only)

2.3 Operating techniques

2.3.1 The activities shall be operated using the techniques and in the manner described in Table 2.3 below.

Table 2.3 Operating techniques

<p>Open Systems</p> <ol style="list-style-type: none"> 1. The storage, physical treatment and composting of wastes shall take place on hardstanding subject to paragraph 2 below. 2. When located within groundwater source protection zone 1 or 2 the storage, physical treatment and composting of wastes shall take place only on an impermeable surface with sealed drainage system. <p>Closed Systems</p> <ol style="list-style-type: none"> 3. The storage, physical treatment and composting of wastes shall take place on an impermeable surface. 4. The sanitisation of wastes shall take place in a closed system incorporating a bio-filter and/or equivalent abatement system. 5. The bio-filter and/or equivalent abatement system shall be specifically designed, operated and maintained to minimise the release of odour, bioaerosols and micro-organisms. <p>Open and closed systems</p> <ol style="list-style-type: none"> 6. The storage, physical treatment and composting of wastes under anaerobic conditions shall be prevented 7. Each composting batch shall undergo an identifiable sanitisation and stabilisation stage
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2.4 The site

2.4.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan attached to the permit.

2.4.2 The activities shall not be carried out within:

- (a) 250 metres of the nearest sensitive receptor;
- (b) 500 metres of a European Site or Site of Special Scientific Interest (SSSI);
- (c) 250 metres of the presence of great crested newts, where it is linked to the breeding ponds of the newts by good habitat.
- (d) 50 metres of a site that has relevant species or habitats protected under the Biodiversity Actio Plan that the Environment Agency considers at risk to this activity.

- (e) 10 metres of any watercourse;
- (f) 50 metres of any well, spring or borehole used for the supply of water for human consumption. This must include private waters supplies;

3 – Emissions and monitoring

3.1 Emissions to air, water or land

- 3.1.1 There shall be no point source emissions to air, water or land, except from the sources and emission points listed in table 3.1.

Table 3.1 Point source emissions to air
Emission Point and Source
Outlets from bio-filters and/or equivalent abatement systems, emitting treated air from closed systems.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.
- 3.3.2 The operator shall:
- (a) maintain and implement an odour management plan;
 - (b) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the specified period, a revised odour management plan;
 - (c) implement any approved revised odour management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable, to minimise, the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing with the Environment Agency, undertake monitoring for the parameters specified in table 3.5 below.
- 3.5.2 The operator shall maintain records of all monitoring required by these standard rules including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment and evaluation made on the basis of such data.
- 3.5.3 All composted waste shall be monitored to ensure it is sanitised and stabilised after treatment.

Table 3.5 Activities – Monitoring requirements		
Monitoring point	Parameter	Other specifications
Internal for each composting batch during sanitisation and stabilisation	Temperature	Monitoring equipment shall be available on-site and used as required to ensure compliance with these standard rules.
	Moisture	Monitoring shall be carried out to ensure aerobic conditions are maintained and to prevent waste becoming anaerobic.
Bio-filters on outlets from closed systems	Moisture	Monitoring shall be carried out to ensure the bio-filter and/or equivalent abatement system is in good working order and remains fit for purpose.
Other abatement systems on outlets from closed systems	Not specified	

4 – Information

4.1 Records

4.1.1 All records required to be made by these standard rules shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible or are capable of retrieval; and
- (d) be retained, unless otherwise agreed by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by these standard rules, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by these standard rules to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in these standard rules; or
- (c) any significant adverse environmental effects.

4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emission limits shall be submitted within 24 hours.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters except where such disclosure is prohibited by Stock Exchange rules:

- a) Where the operator is a registered company:
 - any change in the operator's trading name, registered name or registered office address; and
 - any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- b) Where the operator is a corporate body other than a registered company:
 - any change in the operator's name or address; and
 - any steps taken with a view to the dissolution of the operator.

- c) In any other case:
- the death of any of the named operators (where the operator consists of more than one named individual);
 - any change in the operator's name(s) or address(es); and
 - any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.

4.4 Interpretation

4.4.1 In these standard rules the expressions listed below shall have the meaning given.

4.4.2 In these standard rules references to reports and notifications mean written reports and notifications, except when reference is being made to notification being made "without delay", in which case it may be provided by telephone.

"accident" means an accident that may result in pollution.

'Animal By-Products Regulations' means The Animal By-Products Enforcement (England) Regulations 2011 (SI 2011 No.881) and the Animal By-Products (Enforcement) (Wales) Regulations 2011 (SI 2011 No.600 W.88).

"animal waste" means any waste consisting of animal matter that has not been processed into food for human consumption. This does include, blood, feathers, uncooked butchers waste and any other animal waste that is not catering waste or former foodstuffs. This does not include faecal matter from animals (e.g. chicken litter or farmyard manure).

"authorised officer" means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

"BAP" means Biodiversity Action Plan. This is a non-statutory plan created by the UK Biodiversity Partnership and the UK Government, in response to the Convention on Biological Diversity (CBD) signed in 1992. It describes the UK's biological resources, and commits a detailed plan for the protection of these resources.

"closed system" means a closed composting reactor or closed area (such as a building) in which waste is fully contained, and efficient air management abatement systems are demonstrated. This may cover a wide range of technology and, where necessary, is in compliance with Animal By-Products Regulations.

"compost" means a solid particulate material that is the result of composting, which has been *sanitised* and *stabilised*, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

"compostable plastics" means plastics that are certified to meet the standards of EN 13432, EN 14995 or equivalent.

"composting" means the managed biological decomposition of biodegradable waste, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost.

"composting batch" means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous or plug-flow basis, batches will be taken to mean a series of "portions of production".

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from emission points specified in these standard rules or from other localised or diffuse sources, which are not controlled by an emission limit.

"European Site" means Special Area of Conservation or candidate Special Area of Conservation or Special Protection Area or proposed Special Protection Area in England and Wales, within the meaning of Council Directives 79/409/EEC on the conservation of wild birds and 92/43/EEC on the conservation of natural habitats and of wild flora and fauna and the Conservation of Habitats and Species Regulations 2010. Internationally designated Ramsar sites are dealt with in the same way as European sites as a matter of government policy and for the purpose of these rules will be considered as a European Site.

"good habitat" means rough (especially tussocky) grassland, scrub and woodland

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“*groundwater source protection zone*” has the meaning given in the document titled “Groundwater Protection: Policy and practice” published by the Environment Agency in 2012.

“*hardstanding*” is a compacted solid surface capable of withstanding the operation and the loading / unloading of wastes.

“*impermeable surface*” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system” (below).

“*nearest sensitive receptor*” means the nearest place to the composting operations where people are likely to be for prolonged periods. This term would therefore apply to dwellings (including any associated gardens) and to many types of workplaces. NB We would not normally regard a place where people are likely to be present for less than 6 hours at one time as being a sensitive receptor. It does not apply to the operators of composting facilities or their staff while carrying out the composting operation as their health is covered by Health and Safety legislation.

“*open system*” means a composting system, such as outdoor, turned windrowing, where the waste and the resulting emissions are not fully contained during sanitisation. It includes other technologies such as aerated static piles.

“*pollution*” means emissions as a result of human activity which may—

- (a) be harmful to human health or the quality of the environment,
- (b) cause offence to a human sense,
- (c) result in damage to material property, or
- (d) impair or interfere with amenities and other legitimate uses of the environment.

“*quarter*” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“*R*” means a recovery operation provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste.

“*sanitisation*” means the actively managed and intensive stage of composting, lasting for at least five days, characterised by high oxygen demand and temperatures of over 55^oC, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels..

“*sealed drainage system*” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- (a) no liquid will run off the surface otherwise than via the system;
- (b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump.

“*secure storage*” means storage where waste cannot escape and members of the public do not have access to it.

“*SSSI*” means Site of Special Scientific Interest within the meaning of the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

“*stable, stabilised*” means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions

“*stabilisation stage*” means the stage of composting following sanitization, during which biological processes, together with conditions in the composting mass, give rise to compost that is nominally stable

“*treated wood*” is any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, waterborne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and veneer).

“*waste code*” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“*year*” means calendar year commencing on 1st January.

End of standard rules